Docket No.: 46030/P044US/10407181
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Timothy E. Ostromek et al.

Application No.: 10/699,985 Confirmation No.: 5305

Filed: November 3, 2003 Art Unit: 2624

For: IMAGE PROCESSING USING OPTICALLY TRANSFORMED LIGHT Examiner: B. Krasnic

PRE-APPEAL BRIEF REQUEST FOR REVIEW

MS AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

INTRODUCTORY COMMENTS

Applicant requests review of the rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reasons stated below.

REMARKS

I. General

Each of the independent claims stands rejected under 35 U.S.C. § 103. Specifically, independent claims 1, 8, and 15-17 and dependent claims 2, 4-6, 9, 11-13, and 18 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight* in view of *Clune*.

Claims 3 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight*, as modified by *Clune*, as applied to claims 1 and 8 above, and further in view of *Evans*.

II. 35 U.S.C. § 103(a) Rejection over *Spight* in view of *Clune*

Independent claims 1, 8, and 15-17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight* in view of *Clune*. Applicant respectfully traverses the rejection. For brevity, Applicant does not separately argue dependent claims 2, 4-6, 9, 11-13, and 18 herein, but does reiterate that the dependent claims are allowable at least because of their dependence on their respective base claims.

Spight teaches a machine vision system that determines the location and orientation of workpieces in a batch manufacturing environment. See *Spight* at title and Col. 1, lines 46-49. The system monitors a scene that is viewed with a video camera. See id. at Col. 1, line 66 through Col. 2, line 8. The viewed scene is output on CRT 10. A reference scene is output on CRT 12. The light from each of the CRTs is passed along it respective path. Among other things, the light from each CRT is optically Fourier transformed (at respective lenses 30 and 32) and then combined by beam splitter 34. The combined light is optically inverse-Fourier transformed and picked up by video camera 40. The inversely transformed combined image is changed to an electrical signal by video camera 40 and is monitored for its degree of correlation between the viewed scene and the reference scene. See id. at Col. 2, line 53 through Col. 3, line 6.

Clune teaches a system for correcting image misalignment between two images in a sequence of images. See *Clune* at Abstract. With respect to claim 1, the rejection cites *Clune* in order to show that the claimed features, "generating a first metric in accordance with the first optically transformed light," and "generating a second metric in accordance with the second optically transformed light" are found in the prior art. See Final Office Action of July 2, 2008, at 7-8 (the "Final Office Action").

Applicant had originally understood the rejection to propose placing *Clune*'s steps 210 and 216 into the *Spight* system after *Spight*'s Fourier transform lenses (items 30 and 32 of FIGURE 1 of *Spight*). Applicant responded appropriately by showing 1) that the cited combination failed to teach or suggest the features of the claims (including the above-recited feature of claim 1), and 2) that the cited combination was improper because it would modify the system of *Spight* to be inoperable. See Response to Non-Final Office Action, filed

February 8, 2008, at 10-11. Applicant believes these arguments to be correct, but for the sake of brevity, does not repeat them herein.

In response to Applicant's observations, the Examiner now clarifies the rejection by stating that the rejection really meant to propose placing "*Clune*'s initial display means 262 and 276...between *Spight*'s Fourier transform lens and yield processor correlation." See Final Office Action at 3. The rejection further states that the "pre-displays" 262 and 276 "would just allow the user to visually see the differences between the initial image information and the correlated processed image information for validation for the correction of misalignment." See id. In other words, to the best of Applicant's understanding, the rejection now asserts that i) *Clune* includes "display means" at 262 and 276 (see FIGURES 2B-2 and 2C-2), ii) the "display means" at 262 and 276 generate the claimed metrics, and iii) the "display means" at 262 and 276 are just user displays that allow a user to compare initial image information and correlated processed image information. The rejection is in clear error.

Claim 1 recites, in part, "generating a first metric in accordance with the first optically transformed light" and "generating a second metric in accordance with the second optically transformed light." If, as the rejection now suggests, "display means" 262 and 276 are just user displays, then they do not generate the claimed metrics. For instance, claim 1 goes on to recite that the claimed metrics, which are generated as recited above, are also processed to yield a processed metric, and an inverse optical transform is performed on the processed metrics. The above features of claim 1 are not satisfied by the rejection's proposed system that is asserted to generate a metric by "just allow[ing] a user to visually see differences." See Final Office Action at 3. Simply allowing a user to visually see information does not process metrics nor perform an inverse optical transform on metrics, as claimed. Thus, the rejection strives to show generated metrics, but in doing so, the proffered analysis fails to produce a combination of *Spight* and *Clune* that can also process generated metrics and inversely optically transform the processed metrics. Therefore, the combination of *Spight* and *Clune* cannot, and does not, teach or suggest generating a first and a second metric, as claimed by claim 1.

Independent claim 8 recites, in part, "a first processor operable to generate a first metric in accordance with the first optically transformed light," "a second processor operable to generate a second metric in accordance with the second optically transformed light," "an image processor operable to process the first metric and the second metric to yield a processed metric," and "an inverse optical transformer operable to perform an inverse optical transform on the processed metric." Independent claim 15 recites, in part, "means for generating a first metric in accordance with the first optically transformed light," "means for generating a second metric in accordance with the second optically transformed light," "means for processing the first metric and the second metric to yield a processed metric," and "means for performing an inverse optical transform on the processed metric to process the image information of the light." Independent claim 16 recites, in part, "generating a first metric in accordance with the first optically transformed light," "generating a second metric in accordance with the second optically transformed light," "processing the first metric and the second metric to yield a processed metric," and "performing an inverse optical transform on the processed metric to process the image information of the light." The combination of *Spight* and *Clune* does not teach or suggest the above-recited features of independent claims 8, 15, and 16 for at least the same reasons articulated above for claim 1.

The Final Office Action rejects independent claim 17 by saying that claim 17 is the corresponding system claim to claim 1, and the rejection then references the rejection of claim 1. Applicant notes that claim 17 and claim 1 have differing scopes. Nevertheless, since the same reasoning seems to be applied in rejecting claim 17 as that applied to reject claim 1, it is believed that claim 17 is not obvious at least for the reasons described above with respect to claim 1. Accordingly, Applicant respectfully requests that the rejections of claims 1, 2, 4-6, 8, 9, 11-13, and 15-18 be withdrawn.

III. 35 U.S.C. § 103(a) Rejection over *Spight*, as modified by *Clune*, and further in view of *Evans*

Claims 3 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Spight* as modified by *Clune*, as applied to claims 1 and 8 above, and further in view of *Evans*. Applicant respectfully traverses the rejection. Claims 3 and 10 depend from claims 1 and 8, respectively, thereby inheriting the limitations therein. As such, at least for the reasons

detailed above, dependent claims 3 and 10 recite limitations not taught or suggested by *Spight* in view of *Clune*. Furthermore, the Office Action does not rely on *Evans* to cure these deficiencies; thus, the cited combination fails to teach each limitation of claims 3 and 10. Accordingly, at least because the combination fails to teach or suggest the claim limitations, Applicant requests the rejections of the dependent claims be withdrawn and the claims be allowed.

IV. Conclusion

In view of the above, Applicant respectfully requests that the review panel reverse the outstanding rejections in the present application. The required fee for the Notice of Appeal filed with this request will be paid by credit card. If any additional fee is due, please charge our Deposit Account No. 06-2380, under Order No. 46030/P044US/10407181 from which the undersigned is authorized to draw.

Dated: September 5, 2008

Respectfully submitted,

By_____

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